

SEQUENCE LISTING

<110> Jahn, Margaret M.
Kang, Byoung-Cheorl

<120> RECESSIVE PLANT VIRAL RESISTANCE RESULTS FROM MUTATIONS
IN TRANSLATION INITIATION FACTOR eIF4E

<130> 19603/4252

<140> 10/538,434

<141> 2003-12-17

<150> 60/434,220

<151> 2002-12-17

<150> PCT/US03/40184

<151> 2003-12-17

<160> 39

<170> PatentIn Ver. 2.1

<210> 1

<211> 875

<212> DNA

<213> Capsicum annuum

<400> 1

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gatgcaatgt cggaatataa gaaacacaat tcgtactgaa aagttgtagg cactagttta 780
gtttctcata cgataaagct tctggtttga gtaccttgtg tattggtgtt tgcactttct 840
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<213> Capsicum annuum

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Lys Val Lys Leu Asn Ala Asn Glu Ala Asp Asp Glu Val Glu Glu Gly
20 25 30

Glu Ile Val Glu Glu Thr Asp Asp Thr Thr Ser Tyr Leu Ser Lys Glu
35 40 45

Ile Ala Thr Lys His Pro Leu Glu His Ser Trp Thr Phe Trp Phe Asp
50 55 60

Asn Pro Val Ala Lys Ser Lys Gln Ala Ala Trp Gly Ser Ser Leu Arg
65 70 75 80

Asn Val Tyr Thr Phe Ser Thr Val Glu Asp Phe Trp Gly Ala Tyr Asn
85 90 95

Asn Ile His His Pro Ser Lys Leu Val Val Gly Ala Asp Leu His Cys
100 105 110

Phe Lys His Lys Ile Glu Pro Lys Trp Glu Asp Pro Val Cys Ala Asn
115 120 125

Gly Gly Thr Trp Lys Met Ser Phe Ser Lys Gly Lys Ser Asp Thr Ser
130 135 140

Trp Leu Tyr Thr Leu Leu Ala Met Ile Gly His Gln Phe Asp His Glu
145 150 155 160

Asp Glu Ile Cys Gly Ala Val Val Ser Val Arg Gly Lys Gly Glu Lys
165 170 175

Ile Ser Leu Trp Thr Lys Asn Ala Ala Asn Glu Thr Ala Gln Val Ser
180 185 190

Ile Gly Lys Gln Trp Lys Gln Phe Leu Asp Tyr Ser Asp Ser Val Gly
195 200 205

Phe Ile Phe His Asp Asp Ala Lys Arg Leu Asp Arg Asn Ala Lys Asn
210 215 220

Arg Tyr Thr Val
225

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 <212> DNA
 <213> Capsicum chinense

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 ttctgggttg ataatacagt ggcgaaatcg agacaagctg cttggggtag ctcgcttcgc 240
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 tctgatacca gctggctata tacgctgctt gcaatgattg gacatcaatt cgatcatgaa 480
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 <213> Capsicum chinense

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 20 25 30
 Glu Ile Val Glu Glu Thr Asp Asp Thr Thr Ser Tyr Leu Ser Lys Glu
 35 40 45
 Ile Ala Ala Lys His Pro Leu Glu His Ser Trp Thr Phe Trp Phe Asp
 50 55 60
 Asn Thr Val Ala Lys Ser Arg Gln Ala Ala Trp Gly Ser Ser Leu Arg
 65 70 75 80
 Asn Val Tyr Thr Phe Ser Thr Val Glu Asp Phe Trp Gly Ala Tyr Asn
 85 90 95
 Asn Ile His His Pro Ser Lys Leu Val Val Arg Ala Asp Leu His Cys
 100 105 110

Phe Lys His Lys Ile Glu Pro Lys Trp Glu Asp Pro Val Cys Ala Asn
 115 120 125

Gly Gly Thr Trp Lys Met Ser Phe Ser Lys Gly Lys Ser Asp Thr Ser
 130 135 140

Trp Leu Tyr Thr Leu Leu Ala Met Ile Gly His Gln Phe Asp His Glu
 145 150 155 160

Asp Glu Ile Cys Gly Ala Val Val Ser Val Arg Gly Lys Gly Glu Lys
 165 170 175

Ile Ser Leu Trp Thr Lys Asn Ala Ala Asn Glu Thr Ala Gln Val Ser
 180 185 190

Ile Gly Lys Gln Trp Lys Gln Phe Leu Asp Tyr Ser Asp Ser Val Gly
 195 200 205

Phe Ile Phe His Asp Asp Ala Lys Arg Leu Asp Arg Asn Ala Lys Asn
 210 215 220

Arg Tyr Thr Val
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 <213> Capsicum annuum

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 ttctgggtttg ataatccaga ggcgaaatcg aaacaagctg cttggggtag ctgcgcgtcgc 240
 aacgtctaca ctttctccac tgttgaagat ttttgggggtg cttacaataa tatccaccac 300
 ccaagcaagt tagttgtggg agcagactta cattgtttca agcataaaat tgagccaaag 360
 tgggaagatc ctgtatgtgc caatggaggg acatggaaaa tgagtttttc aaagggtaaa 420
 tctgatacca gctggctata tacgctgctt gcaatgattg gacatcaatt cgatcatgaa 480
 gatgaaaattt gtggagcagt agttagtgtc agaggtaagg gagaaaaaat atctttgtgg 540
 accaagaatg ctgcaaataa aacggctcag gttagcattg gtaagcaatg gaagcagttt 600
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<210> 6
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<213> Capsicum annuum

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Glu	Ile	Val	Glu	Glu	Thr	Asp	Asp	Thr	Thr	Ser	Tyr	Leu	Ser	Lys	Glu	
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Ile	Ala	Thr	Lys	His	Pro	Leu	Glu	His	Ser	Trp	Thr	Phe	Trp	Phe	Asp	
	50					55					60					
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65					70					75				80		
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			85						90					95		
Asn	Ile	His	His	Pro	Ser	Lys	Leu	Val	Val	Gly	Ala	Asp	Leu	His	Cys	
		100						105					110			
Phe	Lys	His	Lys	Ile	Glu	Pro	Lys	Trp	Glu	Asp	Pro	Val	Cys	Ala	Asn	
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145				150					155					160		
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	195					200						205				
Phe	Ile	Phe	His	Asp	Asp	Ala	Lys	Arg	Leu	Asp	Arg	Asn	Ala	Lys	Asn	
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Arg	Tyr	Thr	Val													
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 ttctgggtttg ataatccaga ggcgaaatcg aaacaagctg cttggggtag ctgcgcgtcgc 240
 aacgtctaca ctttctccac tgttgaagat ttttgggggtg cttacaataa tatccaccac 300
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 20 25 30
 Glu Ile Val Glu Glu Thr Asp Asp Thr Thr Ser Tyr Leu Ser Lys Glu
 35 40 45
 Ile Ala Thr Lys His Pro Leu Glu His Ser Trp Thr Phe Trp Phe Asp
 50 55 60
 Asn Pro Glu Ala Lys Ser Lys Gln Ala Ala Trp Gly Ser Ser Arg Arg
 65 70 75 80
 Asn Val Tyr Thr Phe Ser Thr Val Glu Asp Phe Trp Gly Ala Tyr Asn
 85 90 95
 Asn Ile His His Pro Ser Lys Leu Val Val Gly Ala Asn Leu His Cys
 100 105 110

Phe Lys His Lys Ile Glu Pro Lys Trp Glu Asp Pro Val Cys Ala Asn
 115 120 125

Gly Gly Thr Trp Lys Met Ser Phe Ser Lys Gly Lys Ser Asp Thr Ser
 130 135 140

Trp Leu Tyr Thr Leu Leu Ala Met Ile Gly His Gln Phe Asp His Glu
 145 150 155 160

Asp Glu Ile Cys Gly Ala Val Val Ser Val Arg Gly Lys Gly Glu Lys
 165 170 175

Ile Ser Leu Trp Thr Lys Asn Ala Ala Asn Glu Thr Ala Gln Val Ser
 180 185 190

Ile Gly Lys Gln Trp Lys Gln Phe Leu Asp Tyr Ser Asp Ser Val Gly
 195 200 205

Phe Ile Phe His Asp Asp Ala Lys Arg Leu Asp Arg Asn Ala Lys Asn
 210 215 220

Arg Tyr Thr Val
 225

<210> 9
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

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<223> Description of Artificial Sequence: Primer

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<223> Description of Artificial Sequence: Primer

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<223> Description of Artificial Sequence: Primer

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<210> 16

<211> 23

<212> DNA

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<210> 17

<211> 23

<212> DNA

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<210> 18

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<212> DNA

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<212> DNA

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 <210> 29
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 <223> Description of Artificial Sequence: Primer

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 <220>
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 <210> 36
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 <400> 36
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 <210> 37
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<210> 39

<211> 24

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<223> Description of Artificial Sequence: Primer

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